L4 ANSWER 1 OF 5 CA COPYRIGHT 1998 ACS

AN 125:157280 CA

TI Analysis of surface impurities of semiconductor substrate

IN Fukazawa, Juji

PA Tokyo Shibaura Electric Co, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

PI **JP 08160032 A2** 960621 Heisei

AI JP 94-303375 941207

DT Patent

LA Japanese

IC ICM G01N033-00
ICS G01N031-00; H01L021-66

CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 76

AB The title method comprises the steps of: forming dissocn. soln. contg. HF and O3 on the substrate surface, migrating the soln. through the substrate surface, and analyzing the dissocn. soln.

ST surface analysis impurity semiconductor substrate

IT Semiconductor materials
Surface analysis
(anal. of surface impurities of semiconductor substrate)

IT 7664-39-3, Hydrogen fluoride, analysis 10028-15-6, Ozone, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(anal. of surface impurities of semiconductor substrate)

$-(HF-O_3-H_2O)$ soln, used to remove metallic impurities

AN - 96-345319/35
XRAM- C96-109621
XRPX- N96-290619

102 - (88-89)

TI - Analysis of impurities on semiconductor substrate surface - by applying hydrofluoric acid and ozone-contg. soln. to substrate and analysing impurities formed in soln. quantitatively and qualitatively

DC - L03 S03 U11
PA - (TOKE) TOSHIBA KK
PR - 94.12.07 94JP-303375
NUM - 1 patent(s) 1 country(s)
PN -- JP08160032 A 96.06.21 * (9635) 4p G01N-033/00
AP -- 94JP-303375 94.12.07
IC1 - G01N-033/00
IC2 - G01N-031/00 H01L-021/66
AB - JP08160032 A

The analysis process comprises applying HF and O3 contg. soln. onto surface of the semiconductor substrate, transferring soln. to contact surface of the semiconductor substrate, analysing transferred soln. for quantitative and qualitative measurement of impurities adhered to semiconductor surface.

ADVANTAGE - For analysis of impurities on the surface of semiconductor substrate, with high sensitivity and accuracy.

FN - WPG7EG71.GIF (Dwg.1/2)

(HF-O3-H2O)s

-5- (JAPIO)
AN - 96-160032
TI - ANALYSIS OF IMPURITIES ON SURFACE OF SEMICONDUCTOR SUBSTRATE
PA - (2000307) TOSHIBA CORP
IN - FUKAZAWA, YUJI
PN - 96.06.21 J08160032, JP 08-160032
AP - 94.12.07 94JP-303375, 06-303375
SO - 96.06.21 SECT. , SECTION NO. ; VOL. 96, NO. 6.
IC - G01N-033/00; G01N-031/00; H01L-021/66
JC - 46.2 (INSTRUMENTATION--Testing); 42.2 (ELECTRONICS--Solid State Components)
FKW - R004 (PLASMA); R115 (X-RAY APPLICATIONS)
AB - PURPOSE: To analyze impurities on the surface of a semiconductor substrate with high sensitivity and high accuracy.

NC

(HF-O3-H2O)Soln

CONSTITUTION: An HP aq. soln. or HF vapor is supplied from a line 15 while an O(sub 3) aq. soln. or O(sub 3) gas is supplied from a line 16 to form an HF/O(sub 3) dissolving soln. 17 on the surface of a semiconductor substrate 12 and this semiconductor substrate 12 is subjected to rotary motion by a drive mechanism 14 to allow the dissolving soln. 17 to tumble on the surface of the semiconductor substrate 12. The impurities present on the surface of the semiconductor substrate 12 are dissolved in the dissolving soln. 17. This dissolving soln. 17 is collected by a pipette to be analyzed by a flameless atomic absorption device. By adding HF and O(sub 3) to the dissolving soln. 17, an oxidation film is efficiently formed on the surface of the semiconductor substrate 12 by the oxidizing force of O(sub 3) and the impurities on the surface of the semiconductor substrate are taken in the oxidation film. Thereafter, since the oxidation film is dissolved by the dissolving force of HF without etching the semiconductor substrate 12, the kind and amt. of the impurities bonded to the surface of the semiconductor substrate 12 can be measured with high sensitivity and high accuracy.

1/7/1
DIALOG(R)File 351:DERWENT WPI

001809247
WPI Acc No: 77-30226Y/197717
Removing organic photoresist film from silicon semiconductor wafer - by contacting with inorganic acid soln. and ozone
Patent Assignee: HITACHI LTD (HITA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 77012063 B		19770404					197717 B

Priority Applications (No Type Date): JP 7334544 A 19730328

Abstract (Basic): JP 77012063 B
The film adhered to the silicon wafer is contacted with inorganic acid soln. and simultaneously jetted with ozone.
The process is a photographic technique for removing photo-resist film from a silicon wafer after developing.
Derwent Class: G06; L03; U11; U12
International Patent Class (Additional): H01L-021/30
?